

6AS11

Dual Triode—Sharp-Cutoff Pentode

Dual Triode Has High-Mu Unit & Medium-Mu Unit

DUODECAR TYPE

GENERAL DATA

Electrical:

Heater Characteristics and Ratings (*Design-Maximum Values*):

Voltage (AC or DC) 6.3 ± 0.6 volts

Current at heater volts = 6.3 1.050 amp

Peak heater-cathode voltage

(Each unit):

Heater negative with
respect to cathode. 200 max. volts

Heater positive with
respect to cathode. 200^a max. volts

Direct Interelectrode Capacitances:^b

Triode Unit No.1:

Grid to plate 1.9 pf

Grid to cathode, cathode of triode
unit No.2 & internal shield,
pentode cathode & pentode grid
No.3 & internal shield, and heater. 3.0 pf

Plate to cathode, cathode of triode
unit No.2 & internal shield,
pentode cathode & pentode grid
No.3 & internal shield, and heater. 2.2 pf

Triode Unit No.2:

Grid to plate 3.6 pf

Grid to cathode & internal shield,
pentode cathode & pentode grid
No.3 & internal shield, and heater. 2.4 pf

Plate to cathode & internal shield,
pentode cathode & pentode grid
No.3 & internal shield, and heater. 3.8 pf

Pentode Unit:

Grid No.1 to plate. 0.11 pf

Grid No.1 to cathode of triode
unit No.2 & internal shield,
cathode & grid No.3 & internal
shield, grid No.2, and heater 9.5 pf

Plate to cathode of triode unit
No.2 & internal shield, cathode
& grid No.3 & internal shield,
grid No.2, and heater 4.4 pf

Pentode plate to plate of triode
unit No.2 0.044 max. pf

Plate of triode unit No.1 to plate
of triode unit No.2 0.06 max. pf



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Electron Tube Division
Harrison, N. J.

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Characteristics, Class A₁ Amplifier:

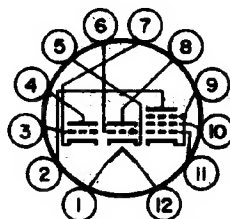
Triode Units			
	Unit No.1	Unit No.2	
Plate Supply Voltage.	200	200	volts
Grid Voltage.	-2	-	volts
Cathode Resistor.	-	220	ohms
Amplification Factor.	68	41	
Plate Resistance (Approx.).	12400	9400	ohms
Transconductance.	5500	4400	μ mhos
Plate Current.	7	9.2	ma
Grid Voltage (Approx.) for plate μ a = 10.	-5.5	-	volts
Grid Voltage (Approx.) for plate μ a = 100.	-	-6.5	volts

Pentode Unit		
Plate Supply Voltage.	200	volts
Grid-No.2 Supply Voltage.	125	volts
Cathode Resistor.	68	ohms
Plate Resistance (Approx.)	70000	ohms
Transconductance.	10500	μ mhos
Plate Current.	24	ma
Grid-No.2 Current.	5.2	ma
Grid-No.1 Voltage (Approx.) for plate μ a = 100.	-8	volts

Mechanical:

Operating Position. Any
 Types of Cathodes Coated Unipotential
 Maximum Overall Length. 2.375"
 Seated Length 1.750" to 2.000"
 Diameter. 1.062" to 1.188"
 Bulb. T9
 Base. Small-Button Duodecar 12-Pin (JEDEC No.E12-70)
 Basing Designation for BOTTOM VIEW. 12DP

Pin 1-Heater
 Pin 2-Pentode Plate
 Pin 3-Grid of
 Triode
 Unit No.2
 Pin 4-Plate of
 Triode
 Unit No.2
 Pin 5-Cathode
 of Triode
 Unit No.1
 Pin 6-Grid of
 Triode
 Unit No.1
 Pin 7-Cathode
 of Triode
 Unit No.2,
 Internal
 Shield



Pin 8-Plate of
 Triode
 Unit No.1
 Pin 9-Pentode
 Cathode,
 Pentode
 Grid No.3,
 Internal
 Shield
 Pin 10-Pentode
 Grid No.2
 Pin 11-Pentode
 Grid No.1
 Pin 12-Heater



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AMPLIFIER — Class A₁

Maximum Ratings, Design-Maximum Values:

Triode Units

	Unit No.1	Unit No.2	
PLATE VOLTAGE	330 max.	330 max.	volts
GRID (CONTROL-GRID) VOLTAGE:			
Positive-bias value	0 max.	0 max.	volts
PLATE DISSIPATION	1.5 max.	2 max.	watts

Pentode Unit

PLATE VOLTAGE	330 max.	volts
GRID-No.2 (SCREEN-GRID) SUPPLY VOLTAGE	330 max.	volts
GRID-No.2 VOLTAGE	See Grid-No.2 Input Rating Chart at front of Receiving Tube Section	
GRID-No.1 (CONTROL-GRID) VOLTAGE:		
Positive-bias value	0 max.	volts
GRID-No.2 INPUT:		
For grid-No.2 voltages up to 165 volts.	1.1 max.	watts
For grid-No.2 voltages between 165 and 330 volts	See Grid-No.2 Input Rating Chart at front of Receiving Tube Section	
PLATE DISSIPATION	5 max.	watts

Maximum Circuit Values:

Values are for Each Unit

	Triode Units	Pentode Unit	
Grid-No.1-Circuit Resistance:			
For fixed-bias operation.	0.5 max.	0.25 max.	megohm
For cathode-bias operation.	1 max.	1 max.	megohm

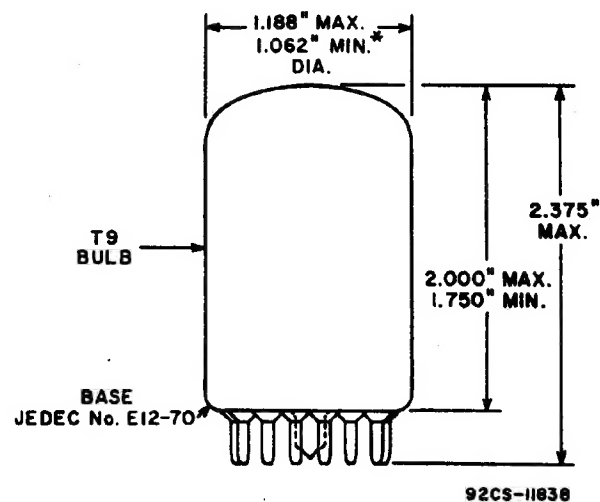
- a The dc component must not exceed 100 volts.
- b without external shield.



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* APPLIES TO MINIMUM DIAMETER EXCEPT IN AREA OF SEAL.